LCD TV Monitor

User Manual

The color and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.

Table Of Contents

MAJOR SAFETY PRECAUTIONS

Before You Start 1-1
Care and Maintenance 1-2
Safety Precautions 1-3

INSTALLING THE PRODUCT

Package Contents 2-1
Installing the Stand 2-2
Removing the Stand 2-3
Attaching a Wall Mount/Desktop Stand 2-4
Connecting to a Computer 2-5
Using it as a TV 2-6
Connecting an HDMI cable 2-7
Connecting Using a DVI to HDMI Cable 2-8
Connecting a Component cable 2-9
Connecting AV Devices 2-10
Connecting to an Amplifier 2-11
Connecting Headphones 2-12
Kensington Lock 2-13

USING THE PRODUCT

Plug & Play Feature 3-1
Viewing the Control panel 3-2
Remote Control 3-3
Using the Screen Adjustment Menu (OSD: On Screen Display) 3-4
Installing the Device Driver 3-5
Standard Signal Mode Table 3-6

INSTALLING THE SOFTWARE

Natural Color 4-1
MultiScreen 4-2

TROUBLESHOOTING

Monitor Self-Diagnosis 5-1
Before Requesting Service 5-2
FAQ 5-3

MORE INFORMATION

Specifications 6-1
Power Saving Function 6-2
Contact SAMSUNG WORLDWIDE 6-3

1 Major Safety Precautions

1-1 Before You Start

Icons used in this manual

ICON	NAME	MEANING
	Caution	Indicates cases where the function may not work or the setting may be canceled.
	Note	Indicates a hint or tip to operate a function.

Using this Manual

- Make yourself fully aware of the safety precautions before using this product.
- If a problem occurs, refer to the 'Troubleshooting' section.

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1-2 Care and Maintenance

External Surface and Screen Maintenance

Clean the product with a soft dry cloth.

- Avoid cleaning the product with an inflammable substance such as benzene or thinner or with a wet cloth. This may result in a problem with the product.
- Avoid scratching the screen with your fingernails or a sharp object.
- Avoid cleaning the product by spraying water onto it. If water enters the product, it may result in fire, electric shock or a problem with the product.

A white stain may be generated on the surface of the model if a supersonic humidifier is used near it.

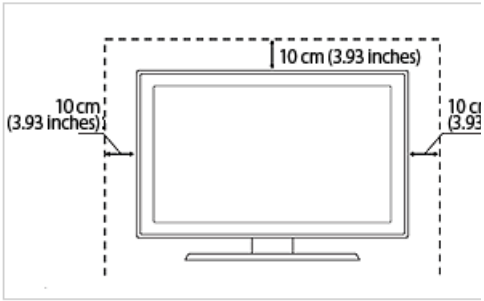
The appearance and the color may differ depending on models.

Securing the Installation Space

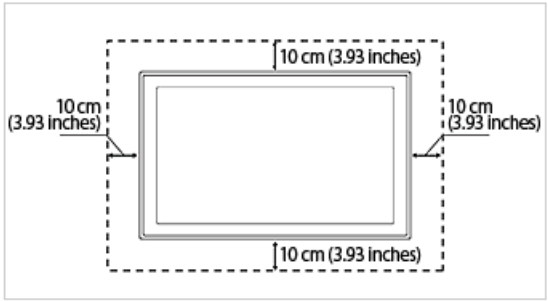
- Keep the required distances between the product and other objects (e.g. walls) to ensure proper ventilation. Failing to do so may result in fire or a problem with the product due to an increase in the internal temperature. Install the product so the required distances shown in the figure are kept.

The appearance may differ depending on the product.

When installing the product with a stand



When installing the product with a wall-mount



About persistent images

- Displaying a still image for a long time may create a persistent image or stain on the screen. If you do not use the product for a long time, set the power-saving mode or screen saver.
- Due to technological constraints of the LCD Panel manufacturer, the images generated by this product may appear either brighter or darker than normal by appr. 1ppm (parts per million) pixel.
  The number of sub-pixels of an LCD panel by size: The number of Sub-Pixels = Max. Horizontal Resolution x Max. Vertical Resolution x 3
  Example) If the maximum resolution is 1920 x 1080, the number of sub-pixels is 1920 x 1080 x 3 = 6,220,800.

Icons used for safety precautions

ICON	NAME	MEANING
	Warning	Failing to follow the precautions marked with this sign may result in a serious injury or even a fatality.
	Caution	Failing to follow the precautions marked with this sign may result in a personal injury or property damage.

Meaning of Signs

Do not perform.

Do not disassemble.

Do not touch.

Must be followed.

The power plug must be unplugged from the wall outlet.

Must be grounded to prevent electric shock.

Power Related

The following images are for your reference and may differ depending on models and countries.

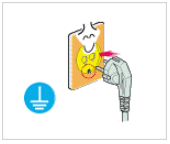
Warning

Avoid using a damaged power cord or plug or a loose power outlet.

- Otherwise, it may result in electric shock or fire.

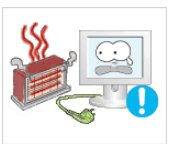
Avoid plugging in or unplugging the power supply with wet hands.

- Otherwise, it may result in electric shock.



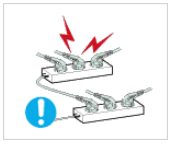
Make sure to connect the power cord to a grounded wall outlet (for insulation class 1 equipment only).

- Otherwise, it may result in electric shock or injury.



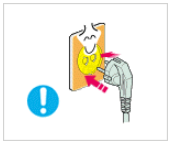
Keep the power cord and the product away from a heater.

- Otherwise, it may result in electric shock or fire.



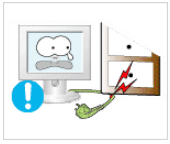
Avoid connecting multiple electric appliances to a single wall outlet.

- Otherwise, it may result in fire due to overheating of the wall outlet.



Plug the power plug in firmly.

- Otherwise, it may result in fire.



Avoid bending or twisting the power cord excessively and avoid placing heavy objects on the cord.

- Otherwise, it may result in electric shock or fire due to a damaged power cord.

If the pins of the power plug or the wall outlet are covered in dust, clean it using a dry cloth.

- Otherwise, it may result in fire.

Caution

Avoid unplugging the power plug while the product is operating.

- Otherwise, it may damage the product due to electric shock.

Make sure to use only the power cord supplied by our company. In addition, do not use the power cord of another electric appliance.

- Otherwise, it may result in electric shock or fire.

When unplugging the power plug from the wall outlet, make sure to hold it by the plug and not by the cord.

- Otherwise, it may result in electric shock or fire.

Connect the power plug to a wall outlet that can be easily reached.

- When a problem occurs with the product, you must unplug the power plug to cut the power off completely. You cannot cut the power off completely using only the power button on the product.

Installation Related

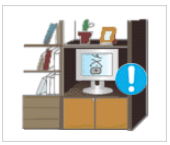
Warning

Avoid placing burning candles, mosquito-repellent or cigarettes on the product.

- Otherwise, it may result in fire.

Ask an installation engineer or relevant company to install the product onto the wall.

- Otherwise, it may result in injury.
- Make sure to use the specified wall mount.



Avoid installing the product in a badly-ventilated location such as inside a bookshelf or closet.

- Otherwise, it may result in fire due to internal over-heating.

Keep a distance of at least 10 cm (3.93 inches) from the wall when installing the product for ventilation.

- Otherwise, it may result in fire due to internal over-heating.

Keep the plastic bags used to pack the product away from children.

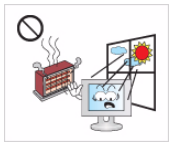
- If children place the plastic bags over their heads, they may suffocate.

Avoid installing the product in a location that is unstable or exposed to excessive vibrations such as on an unstable or slanted shelf.

- The product may fall and this may result in damage to the product or injury.
- If you use the product in a location exposed to excessive vibration, it may result in a problem with the product or fire.

Avoid installing the product in a location exposed to dust, moisture (sauna), oil, smoke or water (rain drops) and installing it within a vehicle.

- This may result in electric shock or fire.



Avoid installing the product in a location exposed to direct sunlight or near a heat source such as a fireplace or heater.

- This may shorten the product life cycle or cause fire.

Avoid installing the product where children may reach it.

- If a child touches the product, the product may fall and this may result in injury.
- Since the front part is heavier, install the product on a flat and stable surface.

Install the antenna far away from any high voltage cables.

- If the antenna touches or falls onto a high voltage cable, it may result in electric shock or fire.

Bend the outdoor antenna cable downwards at the location where it comes in the house so that rainwater does not flow in.

- If rainwater enters the product, it may result in electric shock or fire.

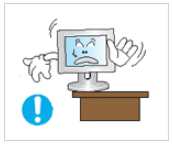
Caution

Do not let the product drop while moving it.

- This may result in a problem with the product or injury.

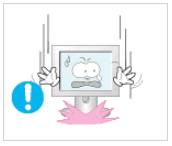
Do not place the product face down on the floor.

- This may damage the panel of the product.



When installing the product on a console or shelf, make sure that the front of the product does not protrude out of the console or shelf.

- Otherwise, this may cause the product to fall off and result in a malfunction or injury.
- Make sure to use a cabinet or shelf suitable to the size of the product.



When putting the product down, handle it gently.

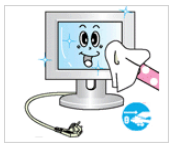
- Otherwise, it may result in a problem with the product or injury.

If the product is installed in a location where the operating conditions vary considerably, a serious quality problem may occur due to the surrounding environment. In this case, install the product only after consulting one of our service engineers about the matter.

- Places exposed to microscopic dust, chemicals, too high or low temperature, high humidity, airports or stations where the product is continuously used.

Cleaning Related

Warning



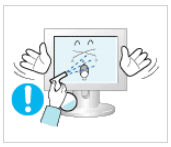
Before cleaning the product, unplug the power cord.

- Otherwise, it may result in electric shock or fire.

When cleaning the product, do not spray water directly over the product parts.

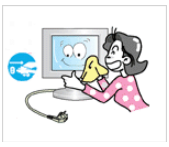
- Make sure that water does not enter the product.
- Otherwise, it may result in fire, electric shock or a problem with the product.

Caution



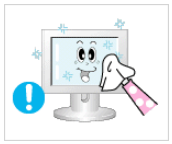
Avoid spraying cleansing agent directly onto the product.

- This may result in discoloration or cracking of the exterior of the product or the panel coming off.



When cleaning the product, disconnect the power cord and clean the product with the supplied cleaning cloth.

- Avoid using chemicals such as wax, benzene, alcohol, thinner, mosquito-repellent, fragrance, lubrication or cleansing agent when cleaning the product.
  This may result in the exterior being deformed or the print being removed.



If you can't get the product clean with just the supplied cloth, use a soft, damp cloth with a "monitor-exclusive cleansing agent" and wipe the product with it.

- If no monitor-exclusive cleansing agent is available, dilute a cleansing agent with water at a ratio of 1:10 before cleaning the product.

Since the exterior of the product is easily scratched, be sure to use the supplied cleansing cloth.

Usage Related

Warning

Since a high voltage runs through the product, never disassemble, repair or modify the product yourself.

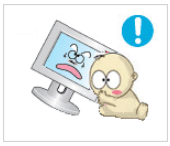
- Otherwise, it may result in fire or electric shock.
- If the product needs to be fixed, contact a service center.

To move the product, turn the power off and unplug the power cord, the antenna cable and any other wires connected to the product.

- Otherwise, it may result in electric shock or fire due to the damaged power cord.

If the product generates a strange noise, a burning smell, or smoke, unplug the power plug immediately and contact a service center.

- Otherwise, it may result in electric shock or fire.



Avoid letting children hang or climb onto the product.

- Otherwise, it may result in the product falling and this may result in injury or death.

If you drop the product or the case is damaged, turn the power off and unplug the power cord.

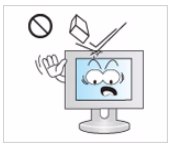
- Otherwise, it may result in fire or electric shock.

Avoid placing objects such as toys and cookies on top of the product.

- If a child hangs over the product to grab an object, the object or the product may fall and this may result in injury or even death.

When thunder or lighting occurs, unplug the power cord and under no circumstance touch the antenna cable as this is dangerous.

- Otherwise, it may result in electric shock or fire.



Avoid dropping an object over the product or cause impact to the product.

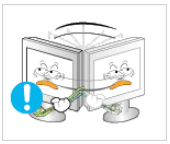
- Otherwise, it may result in electric shock or fire.

Avoid moving the product by pulling the power cord or antenna cable.

- Otherwise, it may result in electric shock, fire or a problem with the product due to damage to the cable.

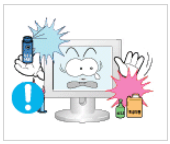
When a gas leak occurs, do not touch the product or the power plug and ventilate immediately.

- A spark may result in an explosion or fire.
- During a thunder or lighting storm, do not touch the power cord or antenna cable.



Avoid lifting up or moving the product by holding only the power cord or signal cable.

- Otherwise, it may result in electric shock, fire or a problem with the product due to damage to the cable.



Avoid using or placing inflammable spray or objects near the product.

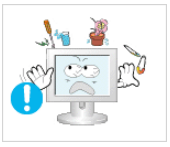
- This may result in an explosion or fire.

Take care not to block the vent by a table cloth or curtain.

- Otherwise, it may result in fire due to internal overheating.

Avoid inserting metal objects such as a chopsticks, coins or hairpins, or inflammable objects into the product (the vents, ports, etc).

- If water or substances enter the product, turn the power off, unplug the power cord and contact a service center.
- Otherwise, it may result in a problem with the product, electric shock or fire.



Avoid placing a liquid container such as a vase, flowerpot, beverage, cosmetics or drugs, or a metal object over the product.

- If water or substances enter the product, turn the power off, unplug the power cord and contact a service center.
- Otherwise, it may result in a problem with the product, electric shock or fire.

Caution

Displaying a still image for a long time may create a persistent image or stain on the screen.

- If you do not use the product for a long time, use the power-saving mode or set the screensaver to the moving picture mode.

When not using the product for a long time such as leaving your home, unplug the power cord from the wall outlet.

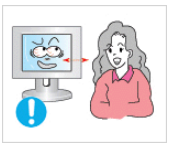
- Otherwise, it may cause dust accumulation and result in fire caused by overheating or short circuit or result in an electric shock.

Set the appropriate resolution and frequency for the product.

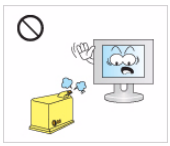
- Otherwise, it may result in eye strain.

Avoid turning the product upside down or move the product holding only the stand.

- This may cause the product to fall, resulting in damage to the product or injury.



Watching the product from too close a distance continuously may damage your eyesight.

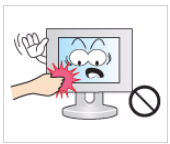


Avoid using a humidifier or cooker near the product.

- Otherwise, it may result in electric shock or fire.

It is important to give your eyes some rest (5 minutes every hour) when viewing the product screen for long periods of time.

- This will alleviate any eye strain.



Since the display panel is hot after using it for a long time, do not touch the product.

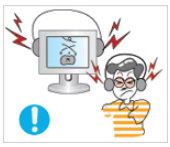
Keep the small accessories in a location out of the reach of children.

Take care when adjusting the angle of the product or the height of the stand.

- If your hand or finger is caught, you may be injured.
- If the product is tilted excessively, the product may fall and this may result in injury.

Avoid placing a heavy object over the product.

- Otherwise, it may result in a problem with the product or injury.

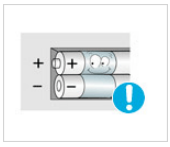


When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.

Be careful that children do not place the batteries in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

- If children have had the battery in their mouths, consult your doctor immediately.



When replacing the batteries, insert them with right polarity (+, -).

- Otherwise, the battery may become damaged or it may cause fire, personal injury or damage due to leakage of the internal liquid.

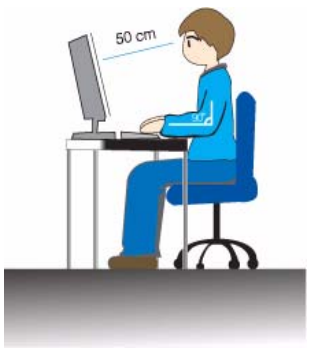
Use only specified standard batteries. Do not use new and used batteries together.

- This may cause a battery to break or leak and may cause fire, injury, or contamination (damage).

The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling.

- The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.

Maintaining the Correct Posture when Using this Product



Maintain the correct posture when using this product.

- Straighten your back.
- Keep a distance of 45~50 cm (15~19 inches) from your eyes to the screen. Look down at the screen and face the screen forwards.
- Maintain the correct posture when using this product.
- Adjust the angle of the product so that light is not reflected onto the screen.
- Keep your elbow at a right angle and keep your arm level with the back of your hand.
- Keep your elbow at a right angle.
- Place your heels flat on the ground while keeping your knees at an angle of 90 degrees or higher and maintain the position of your arm so that your arm is below your heart.

2 Installing the Product

2-1 Package Contents

- Unpack the product and check if all of the following contents have been included.
- Store the packaging box in case you need to move the product at a later stage.

CONTENTS

Quick Setup Guide□□

□□ Product Warranty
(Not available in all locations)

User Manual

Power Cord

Cable Holder

Batteries (AAA X 2)
(Not available in all locations)

Stand Connector

Stand Base

Remote Control

Cleaning Cloth

Stereo Cable

D-Sub Cable

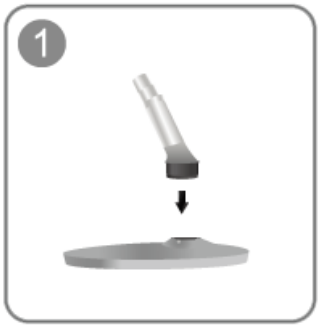
SOLD SEPARATELY

HDMI Cable

The cleaning cloth is supplied with black high-glossy models only.

2-2 Installing the Stand

Before assembling the product, place the product down on a flat and stable surface so that the screen is facing downwards.



Insert the Stand Connector into the Stand Base in the direction shown by the figure.

Check if the Stand Connector is firmly connected.

Turn the connecting screw at the bottom of the Stand base fully so that it is completely fixed.

Place a soft cloth over the table to protect the product and place the product onto the cloth face down.

Hold the main body of the product with your hand as shown by the figure.

Push the assembled stand into the main body in the direction of the arrow as shown in the figure.

- Caution

Do not lift the product holding only the stand

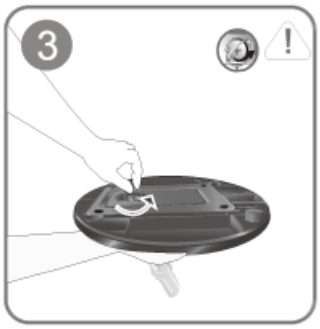
2-3 Removing the Stand

Before removing the stand, place the product down on a flat and stable surface so that the screen faces downwards.

Place a soft cloth over the table to protect the product and place the product face down.

Hold the main body of the product with your hand as shown by the figure.

Pull the stand in the direction of the arrow as shown in the figure to separate it.

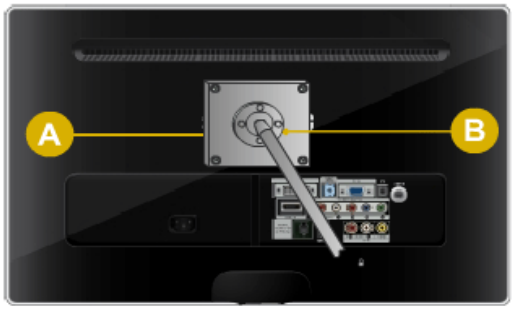


Turn the connecting screw at the bottom of the Stand base to separate it from the Stand connector.

Take the Stand Connector out of the Stand base by pulling it in the direction of the arrow as shown in the figure.

Attaching a Wall Mount/Desktop Stand(not supplied)

This product complies with 75 mm x 75 mm (2.95 x 2.95 inches)/100 mm x 100 mm (3.94 x 3.94 inches) VESA specifications.



A. Wall/Desktop Stand Mount

B. Wall mount kit/desktop stand (not supplied)

1. Turn the product off and unplug the power cord from the wall outlet.
2. Place a soft cloth or cushion on a flat surface to protect the panel and place the product face down.
3. Align wall mount/desktop stand to the Monitor/TV and firmly fix the wall mount/desktop stand by fastening the screw.
4. Align the groove of the part of the product that is to be connected to the stand with the groove in the stand (desk-top stand, wall mount stand or another stand) and firmly fix the stand by fastening the screw.

- If you use screws that are longer than the standard specifications, the inside of the product may be damaged.
- For wall mounts that are not compatible with the standard VESA specifications, the length of the screw may differ depending on the corresponding specifications.
- Avoid using screws that are incompatible with the standard VESA specifications and avoid assembling them using excessive force.
- This may result in damage to the product or injury due to the product falling. Samsung shall not be held liable for any damage or injury.
- Samsung shall not be held liable for any damage to the product or injury caused by using a wall mount/desktop stand that is not compatible with the specifications or due to an installation not performed by an authorized installation engineer.
- When installing the product using a wall mount, purchase a wall mount that provides at least 10 cm (3.93 inches) of space from the wall.
- Use the wall mount according to the international specifications.

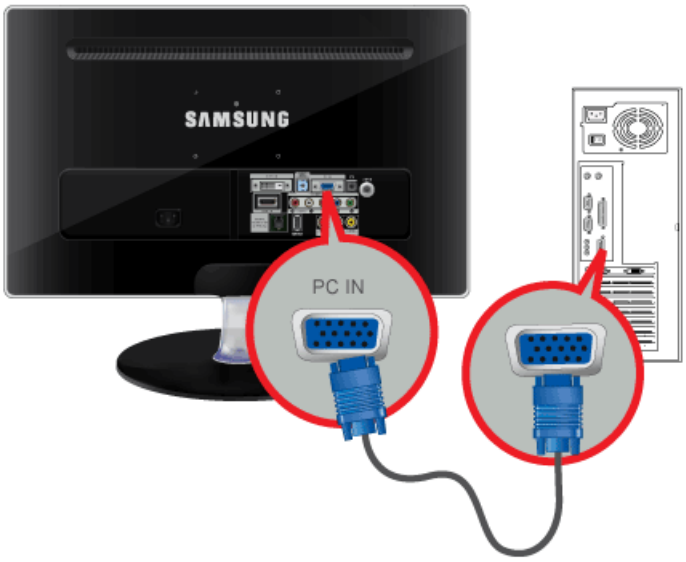
2-5 Connecting to a Computer

1. Connect the product to a PC depending on the video output supported by the PC.

The connecting part may differ depending on the product model.

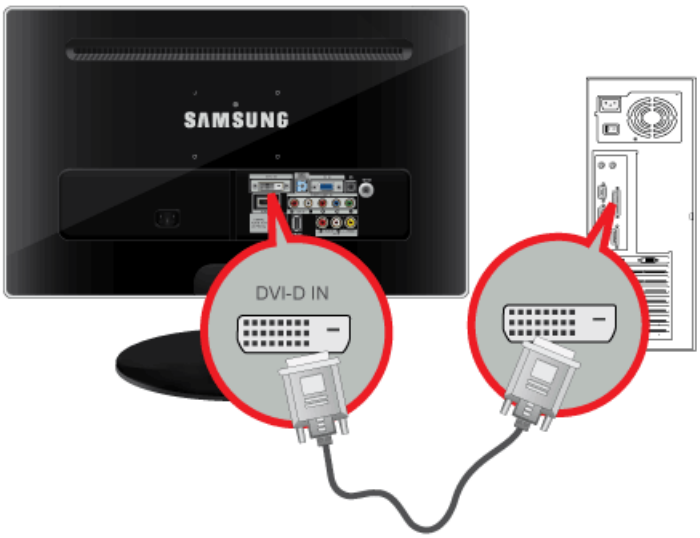
When the graphics card provides a D-Sub (analog) output

- Connect the [PC IN] port of the product to the [D-Sub] port of the PC with the D-Sub cable.

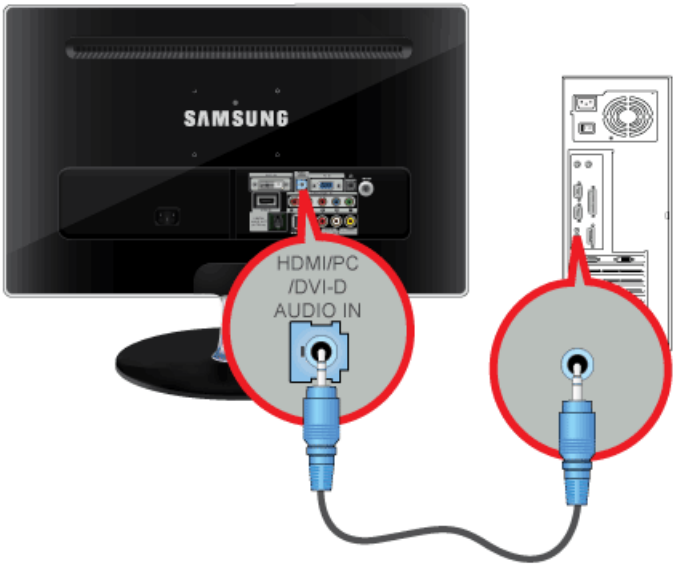


When the graphics card provides a DVI (digital) output

- Connect the [DVI-D IN] port of the product to the [DVI] port of the PC with the DVI cable.

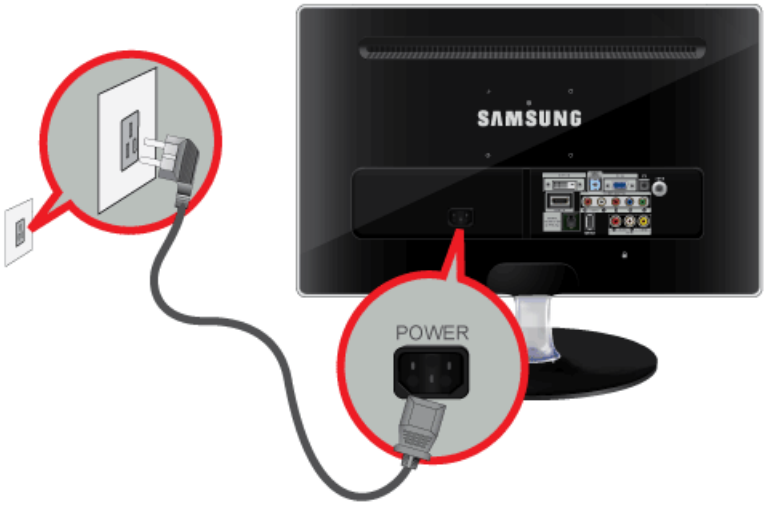


2. Connect the [HDMI/PC/DVI-D AUDIO IN] port on the rear side of the monitor to the sound card of the PC.



3. Connect one end of the power cord to the [POWER] port of the product and connect the other end of the power cord to the 110V or 220V wall outlet.

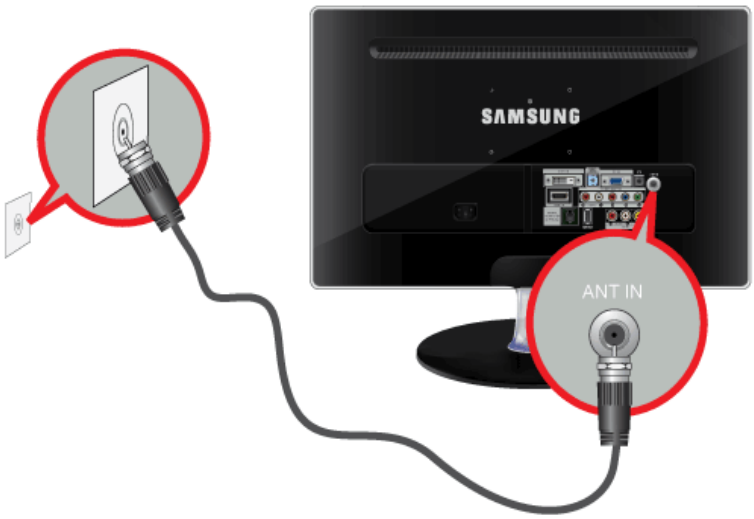
(The input voltage is switched automatically.)



- You may enjoy clear and quality sound from the computer sound card using the monitor's speakers. (You don't need to install separate speakers for your computer.)
- You may get a blank screen depending on the type of video card you are using if you connect the D-sub and DVI cables simultaneously to one computer.
- If you connect your monitor properly using the DVI connector but get a blank or fuzzy screen, check to see if the monitor status is set to analog. Press [⏎] button to have the monitor double-check the input signal source.

2-6 Using it as a TV

You may view television programs on the monitor if it is connected to an antenna or cable system without installing any separate TV reception hardware or software on your computer.



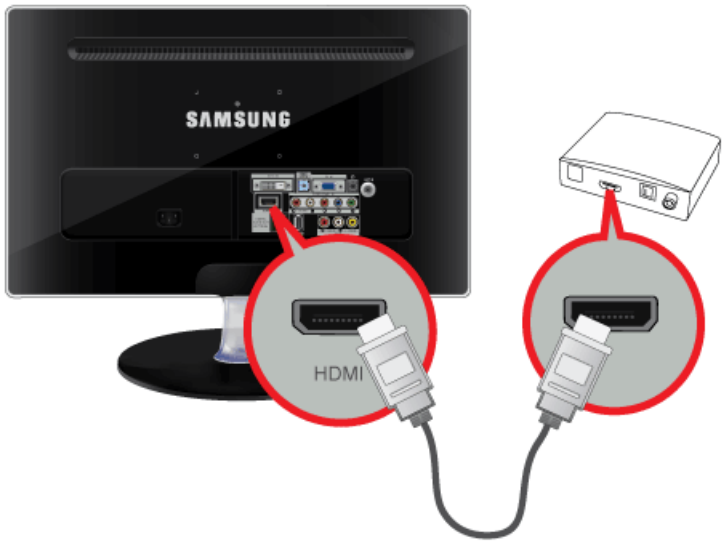
1. Connect the cable or TV antenna cable to the [ANT IN] port on the rear side of the monitor.
   - When using an indoor antenna/cable terminal:
     Check the antenna terminal on the wall and then connect the antenna/cable TV cable.
   - When using an outdoor antenna:
     When using an outdoor antenna, we strongly suggest using a qualified technician to install it.
2. When the connections are completed, connect the TV power.
3. When the product is turned on for the first time after it was purchased, the initial setup operations (<Plug & Play>) begin.

Be careful that the coaxial cable is not bent when connecting it to the antenna input terminal [ANT IN].

2-7 Connecting an HDMI cable

Connect the HDMI OUT port of the AV device (Blu-Ray/DVD/Cable/Satellite box) to the [HDMI IN] terminal of the monitor using the HDMI cable.

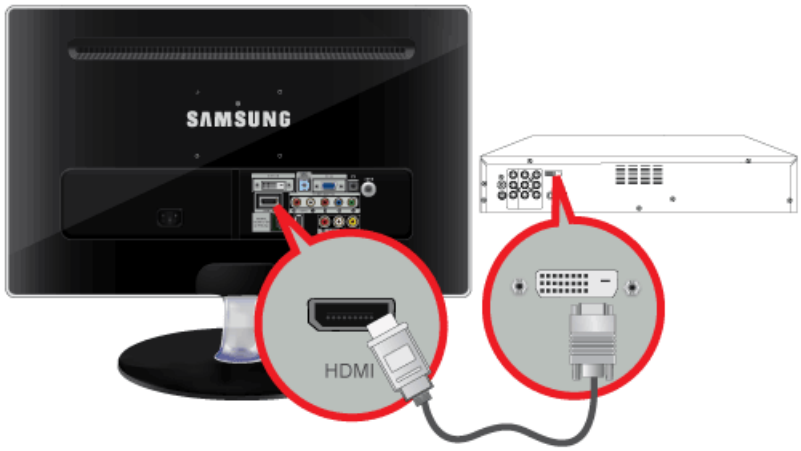
Press the [SOURCE] button at the front of the monitor or on the remote control to select <HDMI> mode.



You do not need to make a separate audio connection when connecting via HDMI.

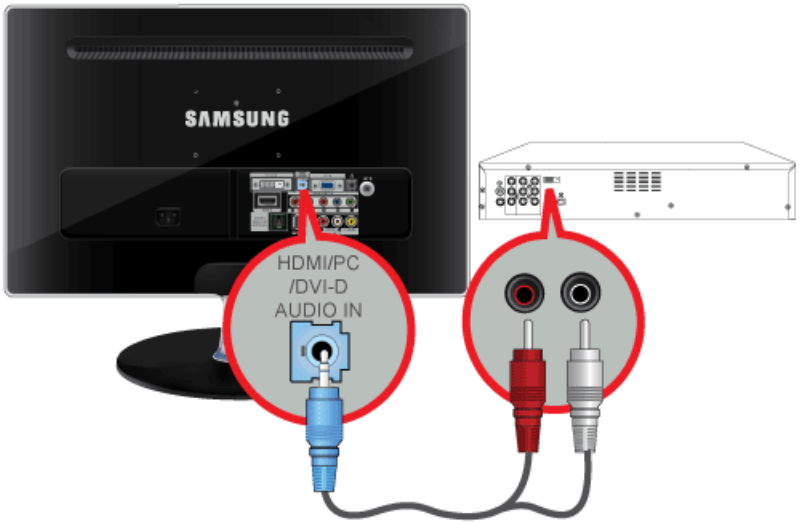
2-8 Connecting Using a DVI to HDMI Cable

1. Connect the DVI output terminal of an external device to the [HDMI IN] terminal of the monitor using a DVI to HDMI cable.



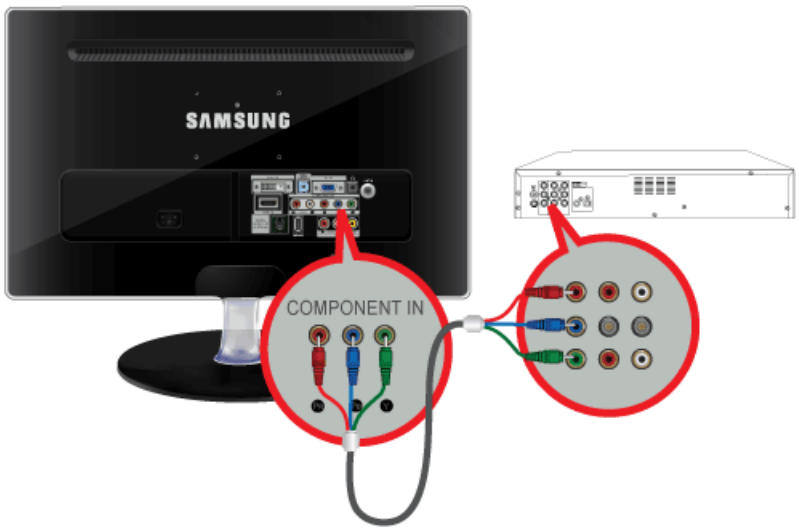
2. Connect the red and white plugs of an RCA to stereo (for PC) cable to the same colored audio output terminals of the digital output device, and connect the opposite plug to the [HDMI/PC/DVI-D AUDIO IN] terminal of the product.

Press the [SOURCE] button at the front of the monitor or on the remote control to select <HDMI> mode.



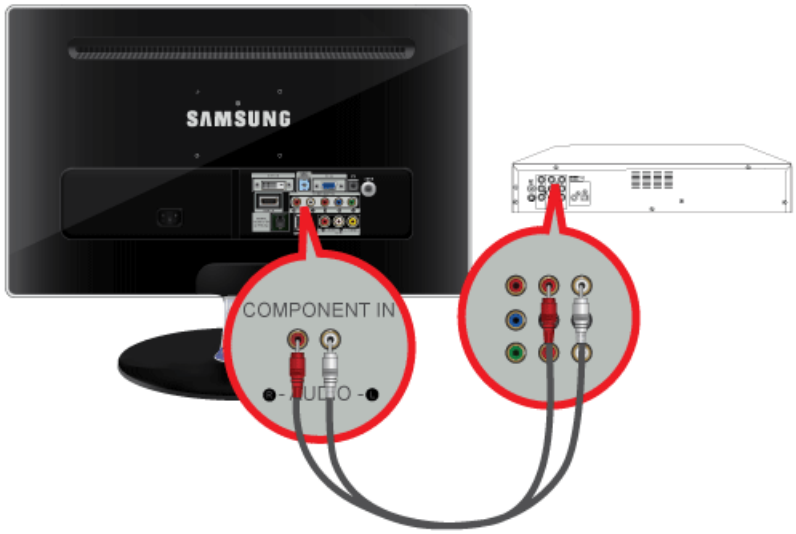
2-9 Connecting a Component cable

1. Connect the VIDEO OUT port of the AV device (DVD/VCR/Cable/Satellite box) to the [COMPONENT IN [P_R, P_B, Y]] input ports using a component video cable [P_R, P_B,Y].



2. Connect the audio port of the AV device (DVD/VCR/Cable/Satellite box) to the [COMPONENT IN [[R-AUDIO-L]] port of the monitor.

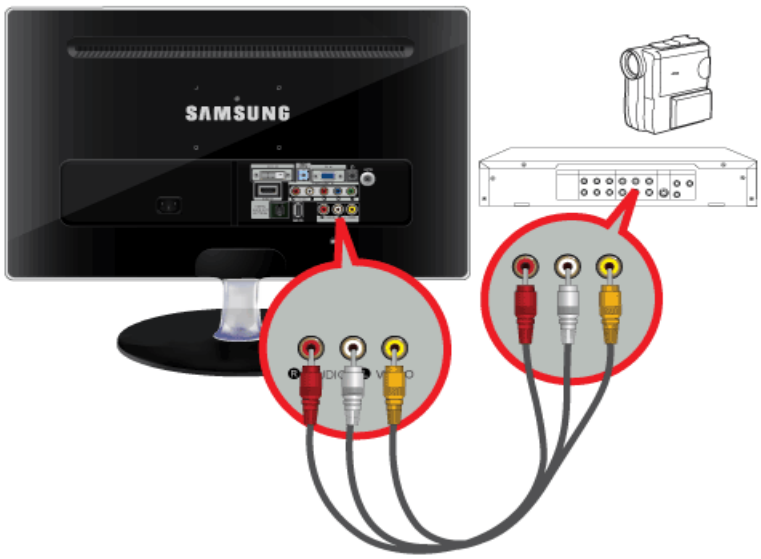
Press the [SOURCE] button at the front of the monitor or on the remote control to select the <Component> mode.



For an explanation of Component video, consult your DVD/VCR/Cable/Satellite box manual.

2-10 Connecting AV Devices

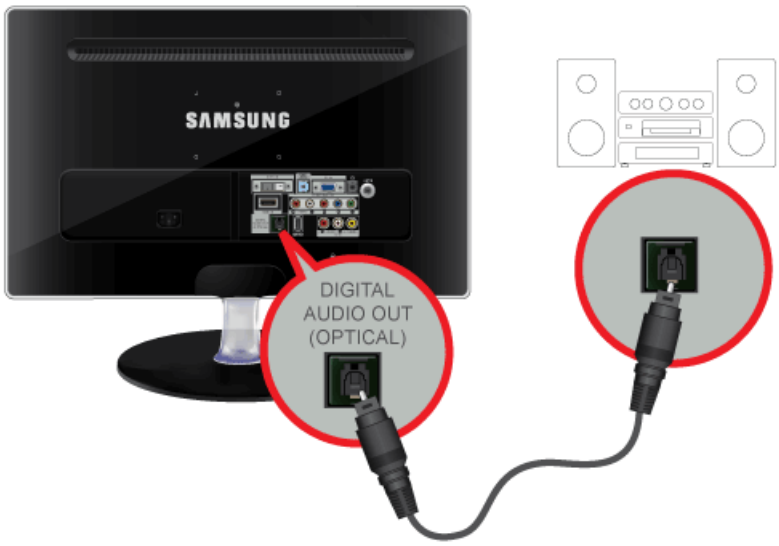
1. Connect the port of the AV device (DVD/VCR/Cable/Satellite box/Camcorder) to the [AV IN [R-AUDIO-L] port of the product.
2. Connect the video output terminal of the AV device and the [AV IN [VIDEO]] of the monitor using a video cable.
3. Select <AV> using the [SOURCE] button on the remote.



The audio-video cables shown here are usually included with a Camcorder. (If not, check your local electronics store.)

2-11 Connecting to an Amplifier

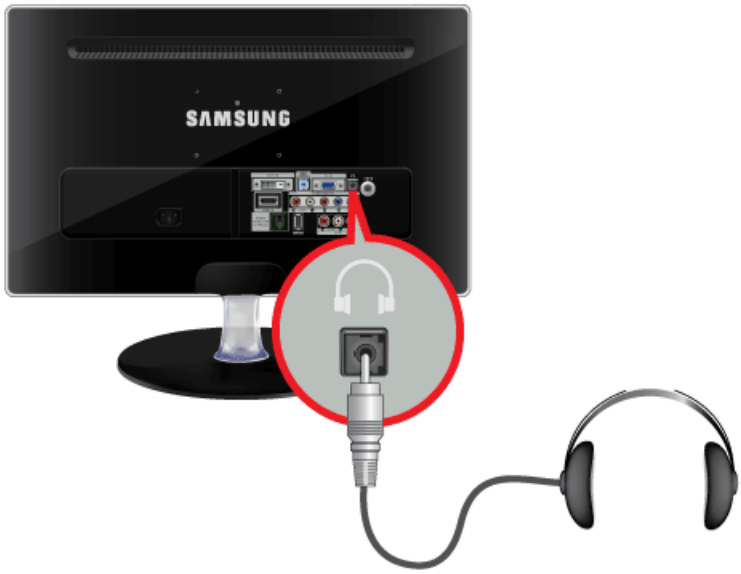
Connect the [DIGITAL AUDIO OUT (OPTICAL)] terminal of your monitor to the optical input of your amplifier using an optical cable.



- If no sound is emitted from the monitor, you need to use an amplifier.
- For information on how to connect a speaker and amplifier, refer to the respective user manuals provided by their manufacturers.

2-12 Connecting Headphones

Connect your headphones to the Headphone connection terminal.



2-13 Kensington Lock

A Kensington Lock is an anti-theft device that enables users to lock the product so that they can safely use it in public locations. Since the shape and usage of the locking device may differ depending on the model and the manufacturer, for more information, refer to the User Manual supplied with the locking device. You have to purchase the locking device separately.

Locking the product

1. Insert the locking part of the locking device into the hole of the Kensington lock of the product (B) and turn it in the locking direction (A).
2. Connect the Kensington lock cable.
3. Tie the Kensington lock cable to a desk or heavy object.

You can purchase the locking device from an electronics store or an online shop.

3 Using the Product

3-1 Plug & Play Feature

When the TV is initially powered on, basic settings proceed automatically and subsequently.

1. Press the [POWER ⏻] button on the remote control.

   • You can also use the [⏻] button on the TV.

2. Press the ▲ or ▼ button to select the language, then press the [↵] button. The message <Select 'Home Use' when installing this TV in your home> is displayed.
3. Press the ◄ or ► button to select <Store Demo> or <Home Use>, then the [↵] button.

   • We recommend setting the TV to <Home Use> mode for the best picture in your home environment.
   • <Store Demo> mode is only intended for use in retail environments. If the unit is accidentally set to <Store Demo> mode and you want to return to <Home Use> (Standard): Press the volume button on the TV. When the volume OSD is displayed, press and hold the [MENU] button on the TV for 5 seconds.

4. The message <Check antenna input.> is displayed with <OK> selected. Press the [↵] button.
5. Press the ▲ or ▼ button to select <Air>, <STD>, <HRC>, or <IRC>, then press the [↵] button.
6. Press the [↵] button to select <Start>. The TV will begin memorizing all of the available channels.

   • To stop the search before it has finished, press the [↵] button with <Stop> selected.

7. The Clock Set menu is displayed. Press the ◄ or ► button to move to the <Month>, <Day>, <Year>, <Hour>, <Minute> or <am/pm>. Set the <Month>, <Day>, <Year>, <Hour>, <Minute> or <am/pm> by pressing the ▲ or ▼ button. Press the [↵] button.

   • You can set the month, day, year, hour, and minute directly by pressing the number buttons on the remote control.

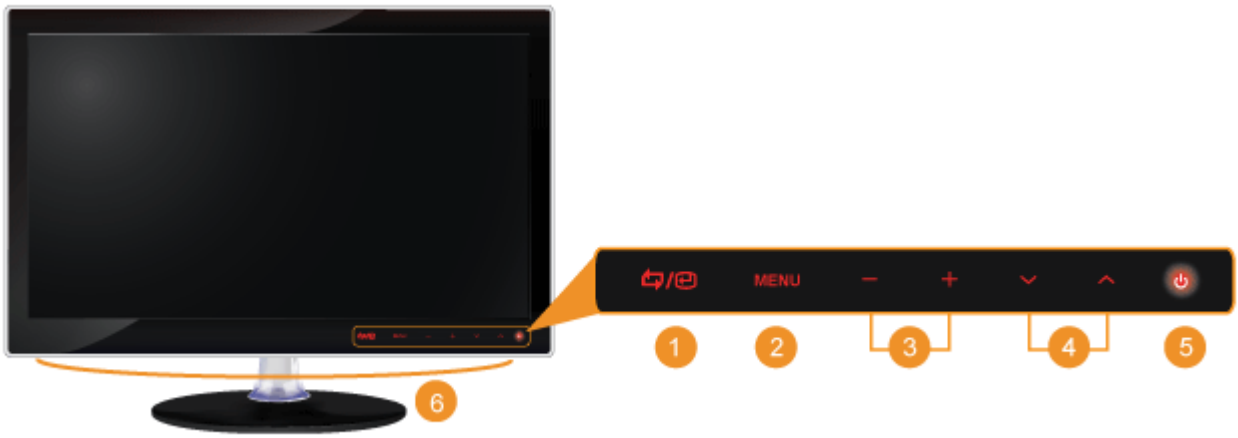
8. The message <Enjoy your TV.> is displayed. When you have finished, press the [↵] button.

If you want to reset this feature...

1. Press the [MENU] button to display the menu. Press the ▲ or ▼ button to select <Setup>, then press the [↵] button.
2. Press the [↵] button again to select <Plug & Play>.

   The <Plug & Play> feature is only available in the TV mode.

3-2 Viewing the Control panel

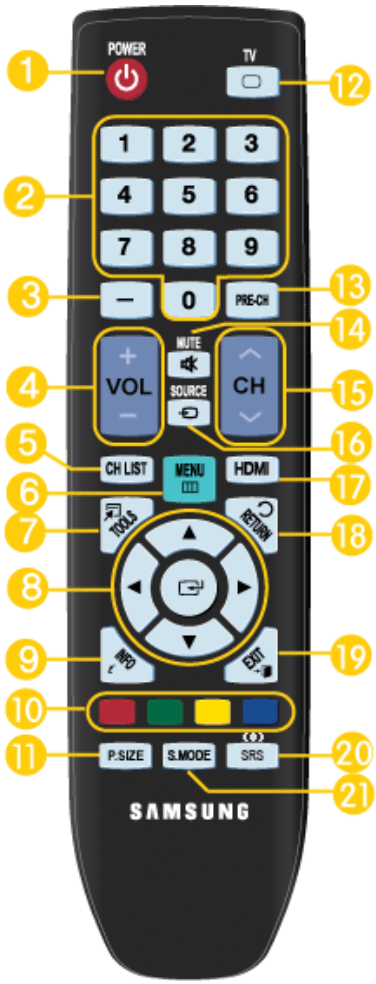


- Touch one of the operating buttons lightly.
- The LED buttons appear.

ICON		DESCRIPTION
1	[⏎/↵]	Use this button to select a function. Signals other than the TV signal can only be selected if the corresponding device is connected. The order in which the TV/external input signal changes. <PC>⟶<DVI>⟶<TV>⟶<AV>⟶<Component>⟶<HDMI>
2	**[MENU]**	Press this button to view the On Screen Display (OSD). This button is also used to exit the OSD or to return to a higher-level OSD menu.
3	[-/+]	Moves from one menu item to another horizontally or adjusts selected menu values. Adjusts the audio volume.
4	[∨/∧]	Use these buttons to navigate the menu or to adjust a value in the OSD. Press to change channels in TV mode.
5	[⏻]	Press this button to turn the product on or off. **Power LED** This LED is turned on when the product works normally. For information about the power saving function, refer to the power saving function section of the product specifications. When not using the product for a long time, unplugging the power cord is recommended to minimize power consumption.
6	**Speakers**	-

3-3 Remote Control

The performance of the remote control may be affected by a TV or other electronic device operating near the product, causing a malfunction due to interference with the frequency.



1. POWER

   Turns the product On/Off.

2. Number Buttons

   Press to change the channel.

3. : Press to select additional channels (digital) being broadcast by the same station. For example, to select channel '54-3', press '54', then press '' and '3'.

4. + VOL -

   Press to increase or decrease the volume.

5. CH LIST

   It displays "Channel List" on the screen.

6. MENU

   Opens the on-screen menu and exits from the menu or closes the adjustment menu.

7. TOOLS

   Use to quickly select frequently used functions.

8. UP ▲/DOWN ▼/LEFT ◀/ RIGHT ▶/ENTER : Use to select on-screen menu items and change menu values.

9. INFO

   Current picture information is displayed on the upper left corner of the screen.

10. COLOR BUTTONS

    Not available.

11. P.SIZE

    Picture size selection.

12. TV

    Selects the TV mode directly.

13. PRE-CH

    This button is used to return to the previous channel viewed.

14. MUTE

    Press to temporarily cut off the sound.

15. ∧ CH∨

    Press to change channels.

16. SOURCE

    Press the button to change the input signal SOURCE.

    Changing the SOURCE is only allowed for external devices that are connected to the monitor at the time.

17. HDMI

    Selects the HDMI mode directly.

18. RETURN

    Returns to the previous menu.

19. EXIT

    Exits from the menu screen.

20. SRS

    Selects SRS TruSurround HD mode.

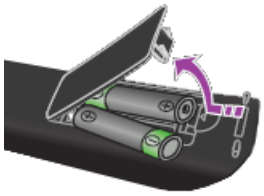
    (Not Available)

21. S.MODE

    Press to select the sound mode.

Installing Batteries in the Remote Control

1. Lift the cover at the back of the remote control upward as shown in the figure.



2. Install two AAA size batteries.

   Make sure to match the +and - ends of the batteries with the diagram inside the compartment.

3. Close the cover.

   Remove the batteries and store them in a cool, dry place if you won't be using the remote control for a long time.

   If the remote control doesn't work, check the following :

   •Is the TV power on?

   •Are the plus and minus ends of the batteries reversed?

   •Are the batteries drained?

   •Is there a power outage or is the power cord unplugged?

   •Is there a special fluorescent light or neon sign nearby?

3-4 Using the Screen Adjustment Menu (OSD: On Screen Display)

The Screen Adjustment Menu (OSD: On Screen Display) Structure

TOP MENUS	SUB MENUS				
Picture [PC / DVI]	MagicBright	Contrast	Brightness	Sharpness	Auto Adjustment
	Screen	Picture Options	Reset		
Picture [TV / AV / Component / HDMI]	Mode	Backlight	Contrast	Brightness	Sharpness
	Color	Tint (G/R)	Advanced Settings	Picture Options	Reset
Sound	Mode	Equalizer	Multi-Track Sound	Auto Volume	Speaker Select
	Sound Select				
Channel	Air/Cable	Auto Program	Channel List	Fine Tune	Color System
Setup	Plug & Play	Language	Time	Child Lock	Change PIN
	Caption	Melody	Light Effect	Light Level	Energy Saving
	AV Color System	PIP			
Input	Source List	Edit Name	Anynet+ (HDMI-CEC)		

Available Modes

The icons below represent the input signals that are displayed when selecting an item in the <Source List>.

P Indicates the signal when <PC> or <DVI> is selected in the <Source List >.
This is the PC video signal that is connected to and input through the [PC] or [DVI] terminals.

A Indicates the signal when <AV> is selected in the <Source List >.
This is the video signal input through the [VIDEO] terminal.

H Indicates the signal when <HDMI> is selected in the <Source List >.
This is the signal input through the [HDMI] terminal.

T Indicates the signal when <TV> is selected in the <Source List >.
This is the signal input through the [ANT IN] terminal.

C Indicates the signal when <Component> is selected in the <Source List >.
This is the signal input through the [COMPONENT] terminal.

Picture [PC / DVI]

The default setting may be different depending on the selected Input Mode (input signal source selected in External Input List) and the selected resolution

MENU	DESCRIPTION
MagicBright P	<MagicBright> is a feature providing an optimum viewing environment depending on the contents of the image you are watching. Currently five different modes are available: <Entertain>, <Internet>, <Text>, <Dynamic Contrast> and <Custom>. Each mode has its own pre-configured brightness value. • <Entertain> High Brightness For watching motion pictures such as a Blu-Ray or DVD. • <Internet> For working with a mixture of images such as texts and graphics. • <Text> For documents or work involving heavy text. • <Dynamic Contrast> <Dynamic Contrast> automatically detects the distribution of the visual signal and adjusts to create an optimum contrast. • <Custom> Although the values are carefully chosen by our engineers, the pre-configured values may not be comfortable to your eyes depending on your taste. If this is the case, adjust the <Brightness> and <Contrast> by using the OSD menu. Press the [TOOLS] button to display the Tools menu. You can also set the <MagicBright> by selecting <Tools>⟶<MagicBright>.
Contrast / Brightness / Sharpness P	You can use the on-screen menus to change the contrast and brightness according to personal preference. • <Contrast> - Adjusts the contrast level of the picture. • <Brightness> - Adjusts the brightness level of the picture. • <Sharpness> - Adjusts the edge definition of the picture.
Auto Adjustment P	The values of <Fine>, <Coarse> and <PC Position> are adjusted automatically. By changing the resolution in the control panel, auto function is performed. Available in <PC> Mode Only Press the [TOOLS] button to display the Tools menu. You can also set the <Auto Adjustment > by selecting <Tools>⟶<Auto Adjustment>.

MENU	DESCRIPTION
Screen P	• <Coarse> Removes noise such as vertical stripes. <Coarse> adjustment may move the screen image area. You may relocate it to the center using the horizontal control menu • <Fine> Removes noise such as horizontal stripes. If the noise persists even after <Fine> tuning, repeat it after adjusting the frequency (<Coarse>.) • <PC Position> Adjusts the screen location horizontally and vertically. • <Image Reset> Image parameters are replaced with the factory default values. Available in <PC> Mode Only
Picture Options P	• <Color Tone> The tone of the color can be changed. Available in <PC> / <DVI> mode only. • <Cool> - <Normal> - <Warm> - <Custom> • <R-Gain> - <G-Gain> - <B-Gain> Adjusts the individual R, G, B (Red, Green, Blue) color controls. • <Size> You can switch the Size. • <16:9> - <4:3>
Reset P	Picture parameters are replaced with the factory default values. • <OK> - <Cancel>

Picture [TV / AV / Component / HDMI]

MENU	DESCRIPTION
Mode TCHA	The Monitor has three automatic picture settings (<Dynamic>, <Standard>, and <Movie>) that are preset at the factory. You can activate either <Dynamic>, <Standard>, or <Movie>. • <Dynamic> Selects the picture for high-definition in a bright room. • <Standard> Selects the picture for optimum display in a normal environment. • <Movie> Selects the picture for viewing movies in a dark room. Press the [TOOLS] button to display the Tools menu. You can also set the <Picture Mode> by selecting <Tools>⟶<Picture Mode>.
Backlight / Contrast / Brightness / Sharp-ness / Color / Tint (G/ R) TCHA	Your television has several setting options that allow you to control the picture quality. • <Backlight> - Adjusts the brightness of LCD back light. • <Contrast> - Adjusts the contrast level of the picture. • <Brightness> - Adjusts the brightness level of the picture. • <Sharpness> - Adjusts the edge definition of the picture. • <Color> - Adjusts color saturation of the picture. • <Tint (G/R)> - Adjusts the color tint of the picture.
Advanced Settings TCHA	Samsung‘s new TVs allow you to make even more precise picture settings than previous models. See below to adjust detailed picture settings. <Advanced Settings> is available in <Standard> or <Movie> mode. • <Black Tone> - You can select the level on the screen to adjust the screen depth. • <Off> - <Dark> - <Darker> - <Darkest> • <Dynamic Contrast> - You can adjust the screen contrast so that the optimal contrast is provided. • <Off> - <Low> - <Medium> - <High> • <Gamma> - You can adjust the Primary Color (Red, Green, Blue) Intensity. • <Color Space> - <Color Space> is a color matrix composed of red, green and blue colors. Select your favorite <Color Space> to experience the most natural color. • <Auto> - <Native> • <White Balance> - You can adjust the color temperature for more natural picture colors. • <R-Offset> - <G-Offset> - <B-Offset> - <R-Gain> - <G-Gain> - <B-Gain> - <Reset> • <Flesh Tone> - You can emphasize the pink <Flesh Tone> in the picture. Changing the adjustment value will refresh the adjusted screen. • <Edge Enhancement> - You can emphasize object boundaries in the picture. • <Off> - <On>

<table>
<tr><th>MENU</th><th>DESCRIPTION</th></tr>
<tr><td>Picture Options
T C H A</td><td>
• <Color Tone>
The tone of the color can be changed.
• <Cool> - <Normal> - <Warm1> - <Warm2>

• <Warm1> or <Warm2> is only activated when the picture mode is <Movie>.
• Settings can be adjusted and stored for each external device you have connected to an input of the TV.

• <Size>
You can switch the Size.
The direct button on the remote control is [P.SIZE] button.
• <16:9> - Adjusts the picture size to 16:9 appropriate for DVDs or wide broadcasting.
• <Wide Zoom> - Magnify the size of the picture more than 4:3.
• <Zoom> - Magnifies the 16:9 wide picture (in the vertical direction) to fit the screen size.
• <4:3> - This is the default setting for a video movie or normal broadcasting.
• <Screen Fit> - Use the function to see the full image without any cutoff when HDMI (720p/1080i/1080p), Component (1080i/1080p) signals are input.

• Temporary image retention may occur when viewing a static image on the set for more than two hours.
• After selecting <Zoom> mode: Select by pressing the ◄ or ► button. Use the ▲ or ▼ button to move the picture up and down. After selecting , use the ▲ or ▼ button to magnify or reduce the picture size in the vertical direction.
• <Wide Zoom>: Move the screen up/down using the ▲ or ▼ button after selecting the by pressing the ► or ENTER ↵ button.
• After selecting <Screen Fit> in HDMI (1080i/1080p) or Component (1080i/1080p) mode
• : Select by pressing the ◄ or ► button. Use the ▲, ▼, ◄ or ► button to move the picture. Press the ENTER ↵ button.
• <Reset> : Press the ◄ or ► button to select <Reset>, then press the ENTER ↵ button. You can initialize the setting.
• HD (High Definition): 16:9 - 1080i (1920x1080), 720p (1280x720)
• Settings can be adjusted and stored for each external device you have connected to an input of the TV.

<table>
<tr><th>Input Source</th><th>Picture Size</th></tr>
<tr><td>TV, AV, Component (480i, 480p)</td><td>16:9, Wide Zoom, Zoom, 4:3</td></tr>
<tr><td>Component (1080i, 1080p), HDMI (720p, 1080i, 1080p)</td><td>16:9, 4:3, Wide Zoom, Zoom, Screen Fit</td></tr>
</table>

• <Digital NR>
Digital Noise Reduction.
If the broadcast signal received by your TV is weak, you can activate the Digital Noise Reduction feature to help reduce any static and ghosting that may appear on the screen.
• <Off> - <Low> - <Medium> - <High> - <Auto>
</td></tr>
</table>

MENU	DESCRIPTION
Picture Options TCHA	• <HDMI Black Level> You can directly select the black level on the screen to adjust the screen depth. This function is active only when the external device is connected via <HDMI>. The <HDMI Black Level> function may not be compatible with all external devices. • <Normal> - <Low> • <Film Mode> The <Film Mode> feature offers you a theater-quality viewing experience. <Film Mode> is supported in <TV>, <Component> (480i / 1080i) and <HDMI> (1080i). • <Off> - <Auto>
Reset TCHA	Picture parameters are replaced with the factory default values. • <OK> - <Cancel>

Sound

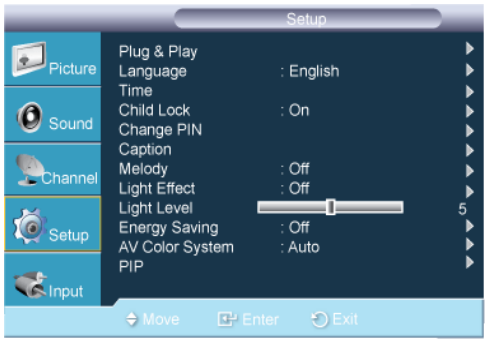
MENU	DESCRIPTION
Mode PTCHA	• <Standard> Choose Standard for the standard factory settings. • <Music> Choose Music when watching music videos or concerts. • <Movie> Choose Movie when viewing movies. • <Clear Voice> Emphasizes voice over other sounds. • <Custom> Choose Custom if you want to adjust the settings according to personal preference .
Equalizer PTCHA	You can adjust the left and right sound balance and equalizer settings as required. • <Balance L/R> - You can adjust the left and right sound balance and equalizer settings as required. • <100Hz> - <300Hz> - <1KHz> - <3KHz> - <10KHz> - To adjust the level of different bandwidth frequencies. If you make any changes to the <Equalizer> settings, the sound mode is automatically switched to the <Custom> mode.

MENU	DESCRIPTION
Multi-Track Sound T	• <Mono> Choose for channels that are broadcasting in mono or if you are having difficulty receiving a stereo signal. • <Stereo> Choose for channels that are broadcasting in stereo. • <SAP> Choose to listen to the Separate Audio Program, which is usually a foreign-language translation. Press the [TOOLS] button to display the Tools menu. You can also set the <Multi-Track Sound> by selecting <Tools> → <Multi-Track Sound>. Available in Analog <TV> Mode Only
Auto Volume P T C H A	Reduces the differences in volume level among channels. • <Off> - <On>
Speaker Select P T C H A	When you watch TV with it connecting to a Home theater, turn the TV speakers off so you can listen to sound from the Home theater's (external) speakers. • <External Speaker> Used to listen to the sound of the External (Home Theater) Speakers. • <TV Speaker> Used to listen to the sound of the TV Speakers. • If you select <External Speaker> in the <Speaker Select> menu, the sound settings will be limited. • The volume and [MUTE] buttons do not operate when the <Speaker Select> is set to <External Speaker>. Please set the volume on your Home theater.
Sound Select P	When the <PIP> feature is activated, you can listen to the sound of the sub (PIP) picture. • <Main> - <Sub> You can select this option when <PIP> is set to <On>. Press the [TOOLS] button to display the Tools menu. You can also set the sound of the sub picture by selecting <Tools> → <PIP> → <Sound Select>.

Channel

MENU	DESCRIPTION
Air / Cable T	Before your television can begin memorizing the available channels, you must specify the type of signal source that is connected to the TV (i.e. an Air or a Cable system). STD, HRC and IRC identify various types of cable TV systems. Contact your local cable company to identify the type of cable system that exists in your particular area. At this point, the signal source has been selected. • <Air> - <STD> - <HRC> - <IRC>
Auto Program T	The TV automatically cycles through all of the available channels and stores them in memory. In rare cases, <Auto program> may miss a few channels due to weak signals and the channels may not be added to the channel memory.
Channel List T	Using this menu, you can conveniently add/delete or lock/unlock channels. Press the [CH LIST] button on the remote control to bring up the channel lists. • <Add> / <Delete> Using the <Channel List>, you can add or delete channels. Move to the ( ) field by pressing the ▲/▼/◄/► buttons, select a channel to be added, and press the [ ] button to add the channel. If you press the [ ] button again, the ( ) symbol next to the channel disappears and the channel is not added. • <Lock> / <Unlock> This feature allows you to prevent unauthorized users, such as children, from watching unsuitable programmes by muting out video and audio. This function is available only when the <Child Lock> is set to on. • Move to the ( ) field by pressing the ▲/▼/◄/► buttons, select a channel to be locked, and press the [ ] button. • The PIN number input screen appears. Enter your 4 digit PIN number. • The default PIN number of a new TV set is '0-0-0-0'. You can change the PIN, by selecting <Change PIN> from the menu. • If you press the [ ] button again, the ( ) symbol next to the channel disappears and the channel lock is canceled. • A blue screen is displayed when <Child Lock> is activated.
Fine Tune T	Use fine tuning to manually adjust a particular channel for optimal reception. • If you do not store the fine-tuned channel in memory, adjustments are not saved. • <*> will appear next to the name of fine-tuned channels. • To reset the fine tuning setting, press the ▼ button to select Reset, then press the [ ] button. Only Analog TV channels can be fine tuned.
Color System T	Normally the TV can receive image and sound with good quality when in the mode <Auto>. This mode detects the signal color system automatically. In case of some signal reception with color unsatisfactory, select the <Color System> Mode to <PAL-M>, <PAL-N> or <NTSC>. • <Auto> - <PAL-M> - <PAL-N> - <NTSC>

Setup



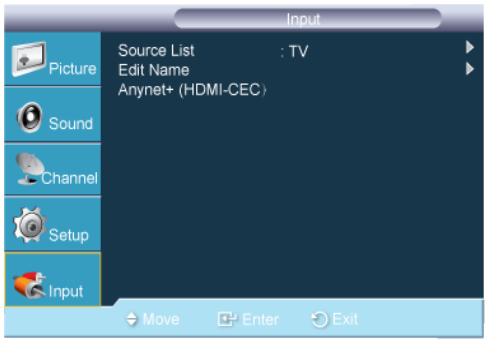
MENU	DESCRIPTION
Plug & Play T	This brings up the menu items that appeared when you first plugged in the TV.
Language PTCHA	You can set the menu language. The language chosen affects only the language of the OSD.

MENU	DESCRIPTION
Time P T C H A	• <Clock Set> Setting the clock is necessary in order to use the various timer features of the TV. The current time will appear every time you press the [INFO] button. If you disconnect the power cord, you have to set the clock again. You can set the month, day, year, hour and minute directly by pressing the number buttons on the remote control. • <Sleep Timer> The sleep timer automatically shuts off the TV after a preset time. • <Off> - <30 min.> - <60 min.> - <90 min.> - <120 min.> - <150 min.> - <180 min.> Press the [TOOLS] button to display the Tools menu. You can also set the sleep timer by selecting <Tools>→<Sleep Timer>. To cancel the <Sleep Timer> function, select <Off>. • <Timer1> / <Timer2> / <Timer3> Three different on / off timer settings can be made. You must set the clock first. • <On Time> Set the <hour>, <minute>, <am/pm>, and <activate/inactivate>. (To activate the timer with the setting you've chosen, set to Activate.) • <Off Time> Set the <hour>, <minute>, <am/pm>, and <activate/inactivate>. (To activate the timer with the setting you've chosen, set to Activate.) • <Repeat> Select <Once>, <Mon~Fri>, <Everyday>, <Mon~Sat> or <Sat~Sun>. • <Volume> Set the desired volume level. • <Channel> • You can set the <hour>, <minute> and channel by pressing the number buttons on the remote control. • Auto Power Off When you set the timer On, the television will eventually turn off if no controls are operated for 3 hours after the TV was turned on by the timer. This function is only available in timer On mode and prevents overheating, which may occur if a TV is on for too long time.
Child Lock T	This feature allows you to prevent unauthorized users, such as children, from watching unsuitable programme by muting out video and audio. • <Off> - <On> • Before the setup screen appears, the PIN number input screen appears. Enter your 4 digit PIN number. • The default PIN number of a new TV set is '0-0-0-0'. You can change the PIN by selecting <Change PIN> from the menu. • You can lock some channels in Channel List. • <Child Lock> is available only in TV mode.

MENU	DESCRIPTION
Change PIN T	You can change your personal ID number that is required to set up the TV. • Before the setup screen appears, the PIN number input screen appears. Enter your 4 digit PIN number. • The default PIN number of a new TV set is '0-0-0-0'. • If you forget the PIN code, press the remote control buttons in the following sequence, which resets the PIN to '0-0-0-0': <POWER> (Off), <MUTE>, 8, 2, 4, <POWER> (On).
Caption (On-Screen Text Messages) T A	• <Caption> / <Mode> / <Channel> / <Field> The Caption function operates when watching regular analog channels or when you have an analog external component (such as a VCR) connected. • The Caption feature doesn't work in <Component>, <PC>, or <HDMI> modes. • Depending on the particular broadcast, it might be necessary to alter the settings to <Channel> and <Field>. • Different channels and fields display different information: Field 2 carries additional information that supplements the information in Field 1. (For example, Channel 1 may have subtitles in English, while Channel 2 has subtitles in Spanish)
Melody P T C H A	A melody sound can be set to come on when the monitor is powered On or Off. • <Off> - <Low> - <Medium> - <High>
Light Effect P T C H A	You can turn the LED on/off on the front of monitor. You can turn it off to save power. • <Off> : Activates the <Light Effect> (LED) only when a button is pressed. • <On> : Activates the <Light Effect> (LED) only while watching the TV.
Light Level P T C H A	Use to adjust the light level i.e., the brightness of the light. • <1> ~ <10> The higher the number, the brighter the light of the LED emits.
Energy Saving T C H A	This feature adjusts the brightness of the TV in order to reduce power consumption. When watching TV at night, set the <Energy Saving> mode option to <High> to reduce eye fatigue as well as power consumption. Press the [TOOLS] button to display the Tools menu. You can also set the sleep timer by selecting <Tools>→<Energy Saving>. • <Off> - <Low> - <Medium> - < High> - <Auto>

MENU	DESCRIPTION
AV Color System A	Normally the TV can receive image and sound with good quality when in the mode <Auto>. This mode detects the signal color system automatically. In case of some signal reception with color unsatisfactory, select the <Color System> Mode to <PAL-M>, <PAL-N> or <NTSC>. • <Auto> - <PAL-M> - <PAL-N> - <NTSC>
PIP P	You can use the PIP feature to simultaneously watch the TV tuner and one extemal video source. This product has one built-in tuner, which does not allow PIP to function in the same mode. Press the [TOOLS] button to display the Tools menu. You can also configure PIP related settings by selecting <Tools> → <PIP>. PIP Settings. **Main picture**: PC, DVI; **Sub picture**: TV, AV If you turn the TV off while watching in PIP mode and turn it on again, the PIP window will disappear. You may notice that the picture in the PIP window becomes slightly unnatural when you use the main screen to view a game or karaoke. You can activate or deactivate the PIP function. • <On> - <Off> • <Source> You can select a source of the sub-picture. • <Size>→ / / You can select a size of the sub-picture. If main picture is in HDMI mode, <Size> is available. • <Position>→ / / / You can select a position of the PIP-picture. In Double (,) mode, <Position> cannot be selected. • <Channel> You can select the channel for the sub-screen. <Channel> is available when the <Source> is set to <TV>.

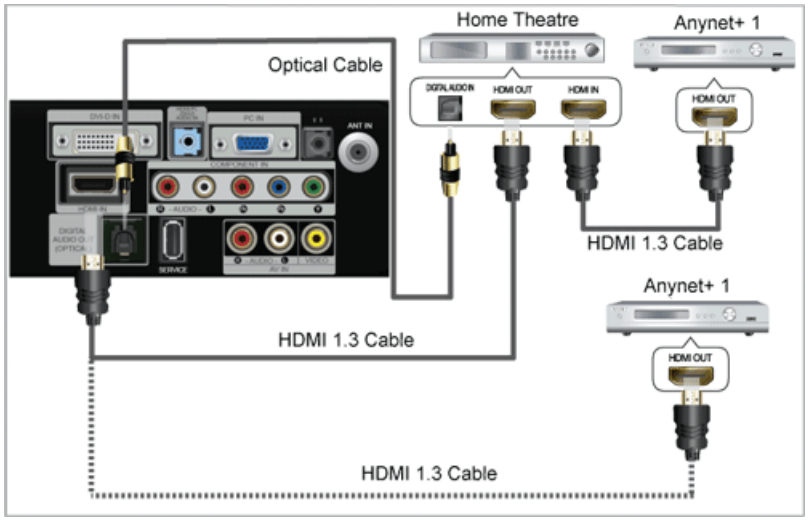
Input



MENU	DESCRIPTION
Source List P T C H A	Use to select <PC>, <TV> or an external input source connected to the Monitor.Use to select the screen of your choice. You can use the [SOURCE] button on the remote control. • <PC> - <DVI> - <TV> - <AV> - <Component> - <HDMI>
Edit Name P T C H A	Name the input device connected to the input jacks to make your input source selection easier. <VCR> - <DVD> - <Cable STB> - <Satellite STB> - <PVR STB> - <AV Receiver> - < Game> -<Cam-corder> - <PC> - <DVI PC> - <DVI> - <TV> - <IPTV> - <Blu-Ray> - <HD DVD> - <DMA>
Anynet+ (HDMI-CEC) P T C H A	<Anynet+> is a function that enables you to control all connected **Samsung** devices that support <Anynet+> with your Samsung TV's remote. The <Anynet+> system can be used only with **Samsung** devices that have the <Anynet+> feature. To be sure your Samsung device has this feature, check if there is an <Anynet+> logo on it.

Anynet+ (HDMI-CEC)

Connecting Anynet+ Devices



1. Connect the [**HDMI IN**] jack on the TV and the HDMI OUT jack of the corresponding <Anynet+> device using an **HDMI** cable.

2. Connect the [**HDMI IN**] jack of the home theatre and the HDMI OUT jack of the corresponding <Anynet+> device using an **HDMI** cable.

Connect the Optical cable between the [**DIGITAL AUDIO OUT (OPTICAL)**] jack on your TV and the Digital Audio Input on the Home Theatre.

When following the connection above, the Optical jack only outputs 2 channel audio. You will only hear sound from the Home Theatre's Front Left and Right speakers and the subwoofer. If you want to hear 5.1 channel audio, connect the [**DIGITAL AUDIO OUT (OPTICAL)**] jack on the DVD / Satellite Box (i.e. Anynet Device 1 or 2) directly to the Amplifier or Home Theatre, not the TV.

Connect only one Home Theatre.

You can connect an <Anynet+> device using the HDMI 1.3 cable. Some HDMI cables may not support <Anynet+> functions.

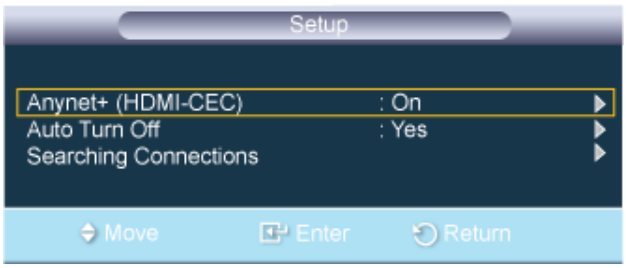
<Anynet+> works when the AV device supporting <Anynet+> is in the Standby or On status.

<Anynet+> supports up to 10 AV devices in total. Note that you can connect up to 3 devices of the same type.

Setting Up Anynet+

Press the [TOOLS] button to display the Tools menu. You can also display the <Anynet+> menu by selecting <Tools>⟶<Anynet+ (HDMI-CEC)>

Setup

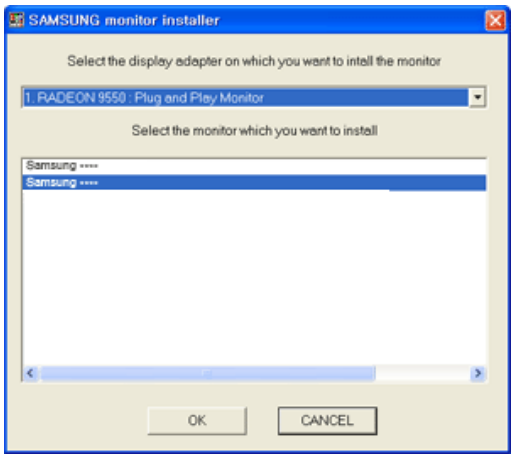


MENU	DESCRIPTION
Anynet+ (HDMI-CEC)	To use the <Anynet+> Function, <Anynet+ (HDMI-CEC)> must be set to On. When the <Anynet+ (HDMI-CEC)> function is disabled, all the < Anynet+> related operations are deactivated.
Auto Turn Off	Setting an <Anynet+> Device to turn Off automatically when the TV is turned off. The active source on the TV remote must be set to TV to use the <Anynet+> function. If you set Auto Turn Off to Yes, connected external devices are also turned off when the TV is turned off. If an external device is still recording, it may or may not turn off.
Searching Connections	The message <Configuring Anynet+ Connection...> is displayed. When searching devices completes, the connected devices are listed in the Anynet+ menu.

3-5 Installing the Device Driver

- If you install the device driver, you can set up the appropriate resolution and frequency for the product. The device driver is included on the CD supplied with the product. If the supplied drive file is corrupted, please visit the Samsung Electronics website (www.samsung.com), and download the driver.
- The installation process may differ slightly depending on the operating system.The following is for installing standard XP drivers.

1. Insert the driver installation CD into the CD-ROM drive.
2. Click on Windows Driver.
3. Select the model of your product from the model list.


SAMSUNG monitor installer
Select the display adapter on which you want to intall the monitor
1. RADEON 9550 : Plug and Play Monitor
Select the monitor which you want to install
Samsung ****
Samsung ****
OK
CANCEL

4. Complete the remaining installation steps according to the instructions displayed on the screen.
5. Check if the appropriate resolution and screen refresh rate are displayed in the Control Panel settings. For more information, refer to the document about the Windows operating system.

3-6 Standard Signal Mode Table

An LCD monitor has one optimal resolution for the best visual quality depending on the screen size due to the inherent characteristics of the panel, unlike a CDT monitor.

Therefore, the visual quality will be degraded if the optimal resolution is not set for the panel size. It is recommended setting the resolution to the optimal resolution of the product.

PC Timing (D-Sub, DVI and HDMI input)

If the signal from the PC is one of the following standard signal modes, the screen is set automatically. However, if the signal from the PC is not one of the following signal modes, a blank screen may be displayed or only the Power LED may be turned on. Therefore, configure it as follows referring to the User Manual of the graphics card.

RESOLUTION	HORIZONTAL FREQUENCY (KHZ)	VERTICAL FREQUENCY (HZ)	CLOCK FREQUENCY (MHZ)	POLARITY (H/V)
IBM, 640 x 350	31.469	70.086	25.175	+/-
IBM, 640 x 480	31.469	59.940	25.175	-/-
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 x 800	49.702	59.810	83.500	-/+
VESA, 1280 x 960	60.000	60.000	108.000	+/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1440 x 900	55.935	59.887	106.500	-/+
VESA, 1680 x 1050	65.290	59.954	146.250	-/+
VESA, 1920 x 1080	67.500	60.000	148.500	+/+

Horizontal Frequency

The time taken to scan one line from the left-most position to the right-most position on the screen is called the horizontal cycle and the reciprocal of the horizontal cycle is called the horizontal frequency. The horizontal frequency is represented in kHz.

Vertical Frequency

A panel must display the same picture on the screen tens of times every second so that humans can see the picture. This frequency is called the vertical frequency. The vertical frequency is represented in Hz.

4 Installing the Software

4-1 Natural Color

What is Natural Color ?

This software is for Samsung products only and enables you to adjust the displayed colors on the product so they more closely match the colors of printed pictures. For more information, refer to the online help of the software (F1).

Natural Color is provided online. You can download it from the website below and install;
http://www.samsung.com/us/consumer/learningresources/monitor/naturalcolorexpert/pop_download.html

4-2 MultiScreen

What is MultiScreen ?

MultiScreen enables you to partition multiple sections on the Monitor.

Installing the Software

1. Insert the installation CD into the CD-ROM drive.
2. Select the MultiScreen setup program.

   If the pop-up screen for the software installation does not appear on the main screen, find and double-click the MultiScreen setup file on the CD-ROM.

3. When the Installation Wizard appears, click [Next].
4. Complete the remaining software installation steps according to the instructions displayed on the screen.

   - The software may not work properly if you do not restart the computer after the installation.
   - The MultiScreen icon may not appear depending on the computer system and the product specifications.
   - If the shortcut icon does not appear, press the F5 key.

MultiScreen Installation Requirements

The MultiScreen installation may be affected by the graphics card, motherboard and the networking environment.

Operating System

OS

- Windows 2000
- Windows XP Home Edition
- Windows XP Professional
- Windows Vista 32Bit
- Windows 7 32Bit

For MultiScreen, Windows 2000 or later operating systems are recommended.

Hardware

•At least 32MB of memory

•At least 60MB of free space on the hard disk drive

Removing the Software

Click [Start], select [Settings]/[Control Panel], and then double-click [Add or Remove Programs].

Select MultiScreen from the program list and click the [Add/Delete] button.

5 Troubleshooting

5-1 Monitor Self-Diagnosis

- You can check if the product is working properly using the Self-Diagnosis function.
- If a blank screen is displayed and the Power LED blinks even if the product and the PC are properly connected, perform the self-diagnosis function according to the procedures below.

1. Turn the product and the PC off.
2. Remove the D-Sub cable from the product.
3. Turn the product on.
4. If the product is working properly, the <Check Signal Cable> message appears.
   In this case, if a blank screen is displayed again, make sure that there is no problem with the PC and the connection.

5-2 Before Requesting Service

Please check the following before requesting After-Sales service. If the problem continues, please contact your nearest Samsung Electronics Service Center.

PROBLEMS RELATED TO INSTALLATION (PC MODE)	
The monitor screen flickers.	Check if the signal cable between the computer and the monitor is securely connected and tightened. (Refer to Connecting to a Computer)
PROBLEMS RELATED TO SCREEN	
Screen is blank and power indicator is off.	Ensure that the power cord is firmly connected and the LCD monitor is on. (Refer to Connecting to a Computer)
<Check Signal Cable> message	Ensure that the signal cable is firmly connected to the PC or video sources. (Refer to Connecting to a Computer)
<Not Optimum Mode> message	Check the maximum resolution and the frequency of the video adapter. Compare these values with the data in the Preset Timing Modes Chart.
Picture rolls vertically.	Check if the signal cable is securely connected.Connect it again securely. (Refer to Connecting to a Computer)
Image is not clear. Picture is blurred.	Run Frequency <Coarse > and <Fine> tuning. Turn on again after removing all accessories(video extension cable, etc.) Set resolution and frequency to the recommended ranges.
Picture image is unstable and vibrates.	Check if the resolution and frequency set for the computer video card falls in the range supported by the monitor. If not, reset them referring to the current <Information> under the monitor menu and Preset Timing Modes.
Ghost images are shown in the picture.	
The image is too light or too dark	Adjust the <Brightness> and <Contrast> (Refer to the <Brightness>, <Contrast>)
Screen is blank and the power indicator light blinks every 0.5 or 1 seconds	The monitor is using its power management system Press a key on the keyboard
The screen is blank and is blinking.	If you see the <TEST GOOD>message on the screen when you press the [MENU] button, check the cable connection between the monitor and the computer to ensure that the connector is properly connected.
PROBLEMS RELATED TO AUDIO	
No sound	Ensure that the audio cable is firmly connected to both the audio-in port on your monitor and the audio-out port on your sound card. (Refer to Connecting to a Computer) Check the volume level.
The sound level is too low.	Check the volume level. If the volume is still too low after turning the control to its maximum, check the volume control on the computer sound card or software program.
PROBLEMS RELATED TO REMOTE CONTROL	
The remote control buttons do not respond.	Check the battery polarities (+/-). Check if the batteries have been exhausted. Check if the power is on. Check if the power cord is securely connected. Check if a special fluorescent or neon lamp is on in the vicinity

NOTE ON THE PRODUCT APPEARANCE	
You may see small particles if you look closely at the edge of the bezel surrounding the screen.	This is part of the product's design and is not a defect.

5-3 FAQ

FAQ	PLEASE TRY THE FOLLOWING!
How can I change the frequency of the video signal?	You have to change the frequency of the graphics card. (For more information, refer to the User Manual of the computer or the graphics card.)
How can I change the resolution?	Windows XP : Change the resolution by selecting Control Panel → Appearance and Themes → Display → Settings. Windows ME/2000 : Change the resolution by selecting Control Panel → Display → Settings. Windows Vista : Change the resolution by selecting “Control Panel”→“Appearance and Personalization”→“Personalization”→“Resolution”. Windows 7 : Change the resolution by selecting “Control Panel”→“Personalization”→“Display”→“Adjust resolution”. (For more information, refer to the User Manual of the computer or the graphics card.)
How can I use the power saving function?	Windows XP : Configure it by selecting Control Panel → Appearance and Themes → Display → Screen Saver Setting or configure it in the BIOS Setup of the computer. Windows ME/2000 : Configure it by selecting Control Panel → Display → Screen Saver Setting or Configure it in the BIOS Setup of the computer. Windows Vista : Change settings by selecting “Control Panel”→ “Appearance and Personalization”→“Personalization”→“Screen Saver”. You can also use the BIOS SETUP menu on the PC. Windows 7 : Change settings by selecting “Control Panel”→“Personalization”→“Screen Saver”. You can also use the BIOS SETUP menu on the PC. (For more information, refer to the User Manual of the computer or the graphics card.)
How can I clean the outer case/LCD Panel?	Disconnect the power cord and then clean the monitor with a soft, dry or slightly damp cloth. Do not leave any detergent or scratches on the case. Do not let any water enter the monitor.
What is the difference between HDTV and SDTV?	There are various types of digital TVs. The most widely known types of digital TV are HDTV and SDTV. They are classified according to the screen quality and the video specifications. • HDTV (High Definition TV):High screen quality. • SDTV (Standard Definition TV):Common standard digital TV. An SDTV has an aspect ratio of 4:3 which is the same as that of an analog TV. HDTV has an aspect ratio of 16:9 which is similar to a cinema screen. This provides a much better screen quality than SDTV. Digital TV broadcasting in our country is ultimately orientated towards HDTV. (At present, all digital TVs from Samsung Electronics have the 16:9 wide aspect ratio.)
Can I watch HD broadcasting with all digital TVs?	You can receive all digital broadcasts, whether they are SD or HD, using any digital TV. However, you cannot enjoy HD programs, which are the highest quality digital TV programs, using an SD digital TV. (At present, all digital TVs from Samsung Electronics have the 16:9 wide aspect ratio.)

FAQ	PLEASE TRY THE FOLLOWING!
Can I watch digital TV broadcasting with an analog TV?	No. The analog TV cannot interpret digital signals. Therefore, a digital TV is required to watch digital TV broadcasting.
Can I use my present antenna to receive digital broadcasting?	As for existing analog TV, digital TV is designed so that digital broadcasting signals are received via both indoor and outdoor antennas. If signal reception is very good in your environment, you can watch digital broadcasts with your existing indoor antenna. If not, it is better to install an outdoor antenna.

6 More Information

6-1 Specifications

MODEL NAME		P2270HN	P2470HN
LCD Panel	Screen Size	21.6 inches (54 cm)	24 inches (61 cm)
	Display Area	477.504 mm (H) x 268.596 mm (V)	531.36 mm (H) x 298.89 mm (V)
	Pixel Pitch	0.248 mm (H) x 0.248 mm (V)	0.27675 mm (H) x 0.27675 mm (V)
Synchroniza-tion	Horizontal	30~81 kHz	
	Vertical	56~75 Hz	
Color		16.7M	
Resolution	Optimal Reso-lution	1920 x 1080 @ 60 Hz	
	Maximum Res-olution	1920 x 1080 @ 60 Hz	
Input Signal, Terminated		RGB analog, DVI (Digital Visual Interface) 0.7 Vp-p ± 5 % Separate Type H/V Sync, Composite TTL Level (V high ≥ 2.0 V, V low ≤ 0.8 V)	
Maximum Pixel Clock		148.500MHz (Analog,Digital)	
Power Voltage		This product supports 100 – 240 V. Since the standard voltage may differ from country to country, please check the label on the back of the product.	
Dimension (Width x Height x Depth) / Weight		536.3 x 345.2 x 66 mm (21.1 x 13.6 x 2.6 inches) (Without Stand) 536.3 x 403 x 189.5 mm (21.1 x 15.9 x 7.5 inches) (With Stand) / 5.4 kg (11.9 lbs)	593 x 377 x 65.5 mm (23.3 x 14.8 x 2.6 inches) (Without Stand) 593 x 445 x 189.5 mm (23.3 x 17.5 x 7.5 inches) (With Stand) / 6.2 kg (13.6 lbs)
VESA Mounting Interface		75 mm x 75 mm (2.95 x 2.95 inches)	100 mm x 100 mm (3.94 x 3.94 inches)
Environmental considerations	Operating	Temperature : 50°F ~ 104°F (10°C ~ 40°C) Humidity : 10 % ~ 80 %, non-condensing	
	Storage	Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Humidity : 5 % ~ 95 %, non-condensing	

Class B (Information Communication Equipment for Home Use)

This device is registered for EMC requirements for home use (Class B). It can be used in all areas. (Class B equipment emits less electromagnetic waves than Class A equipment.)

6-2 Power Saving Function

This product provides a power saving function that automatically turns the screen off when the product is not used for a predetermined period of time to reduce power consumption. If the product enters power saving mode, the power LED turns to a different color to indicate that the product is in power saving mode.

When the product is in power saving mode, the power is not turned off and you can turn the screen on again by pressing any key or clicking the mouse. However, the power saving function only works when the product is connected to a computer that provides the power saving function.

POWER SAVING FUNCTION	NORMAL OPERATION	POWER SAVING MODE	POWER OFF (POWER BUTTON)
Power LED	On	Blinks	Off
Power Consumption	50 watts	less than 2 watts	less than 1 watts

If there is no power cut-off switch, the power consumption is "0" only when the power cord is disconnected.

6-3 Contact SAMSUNG WORLDWIDE

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

Country	Customer Care Center	Web Site
ARGENTINE	0800-333-3733	http://www.samsung.com
BRAZIL	0800-124-421 4004-0000	http://www.samsung.com
CHILE	800-SAMSUNG(726-7864)	http://www.samsung.com
COLOMBIA	01-8000112112	http://www.samsung.com
COSTA RICA	0-800-507-7267	http://www.samsung.com
ECUADOR	1-800-10-7267	http://www.samsung.com
EL SALVADOR	800-6225	http://www.samsung.com
GUATEMALA	1-800-299-0013	http://www.samsung.com
HONDURAS	800-7919267	http://www.samsung.com
JAMAICA	1-800-234-7267	http://www.samsung.com
PANAMA	800-7267	http://www.samsung.com
PUERTO RICO	1-800-682-3180	http://www.samsung.com
REP. DOMINICA	1-800-751-2676	http://www.samsung.com
NICARAGUA	00-1800-5077267	http://www.samsung.com
MEXICO	01-800-SAMSUNG(726-7864)	http://www.samsung.com
TRINIDAD & TOBAGO	1-800-SAMSUNG(726-7864)	http://www.samsung.com
VENEZUELA	0-800-100-5303	http://www.samsung.com